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(54) Title: IMPROVED COMPOSITION AND METHOD FOR REMOVAL OF CARBONYL SULFIDE FROM ACID GAS CONTAINING SAME

$R_1O-(\text{Alk-O})_n-R_2$ (I)

(57) Abstract: Novel solvent composition for selective removal of COS from a gas stream containing same, said composition comprising a) at least one polyalkylene glycol alkyl ether of the formula (I) or 1,3-dimethyl-3,4,5,6-tetrahydro-2(1H)-pyrimidinone or a mixture of N-formylmorpholine and N-acetylmorpholine Wherein R₁ is an alkyl group having from 1 to 6 carbon atoms; R₂ is hydrogen or an alkyl group having from 1 to 4 carbon atoms; Alk is an alkylene group, branched or unbranched, having from 2 to 4 carbon atoms, and n is from 1 to 10; and b) at least one alkanolamine compound of the formula (II) or at least one piperazine compound of formula (III) wherein R₃ is hydrogen, an alkyl group having from 1 to 6 carbon atoms, or the R₄OH group; R₄ is a branched or unbranched alkylene group having from 1 to 6 carbon atoms; R₅, independently in each occurrence, is hydrogen or an hydroxyalkyl group having from 1 to 4 carbon atoms; and R₆ is hydrogen, an alkyl group having from 1 to 6 carbon atoms or an hydroxyalkyl group having from 1 to 4 carbon atoms.

$R_3NHR_4OR_6$ (II)

(III)

